

Appendix 6:

*In re Karlson*, 311 F.2d 581, 136 U.S.P.Q. 184 (C.C.P.A. 1963)

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In re KARLSON

Court of Customs and Patent Appeals  
 Appl. No. 6857

Decided Jan. 16, 1963

United States Patents Quarterly Headnotes

**PATENTS****[1] Patentability--Adding or subtracting parts (§ 51.05)**

Omission of element and its function in combination is obvious expedient if remaining elements perform same functions as before.

**PATENTS****[2] Patentability -- Evidence of -- Economy, efficiency and simplicity (§ 51.461)**

Considerations of simplicity and economy do not alone necessarily impart patentability.

**PATENTS****Particular patents--Feeder**

Karlson, Chemical Feeder, claims 8 and 9 of application refused.

\*184 Appeal from Board of Appeals of the Patent Office.

Application for patent of Wesley Nathaniel Karlson, Serial No. 569,808, filed Mar. 6, 1956; Patent Office Division 39. From decision rejecting claims 8 and 9, applicant appeals. Affirmed.

JOHN F. SMITH and DONALD J. RICH, both of Washington, D.C., for appellant.

CLARENCE W. MOORE (JOSEPH F.

NAKAMURA of counsel) for Commissioner of Patents.

Before WORLEY, Chief Judge, and RICH, MARTIN, SMITH, and ALMOND, Associate Judges.

ALMOND, Judge.

Appellant appeals from an adverse decision of the Board of Appeals which affirmed the examiner's rejection of claims 8 and 9 of his application [FN1] for a patent on a chemical feeder. No claims were allowed.

The board in affirming the examiner's final rejection relied on the following references:

Stewart, 1,362,153, December 14, 1920.

Shuldener, 2,703,176, March 1, 1955.

Claim 8 is illustrative and reads as follows:

8. In a chemical feeder, a chemical tank having a bottom wall with upwardly extended sides defining a clear and unobstructed interior space within which a supply of soluble chemical may be contained and means including a horizontal top wall closing the top of said space in a water-tight relation, means on one of said walls for supporting said tank on a horizontal portion of a water line, and means providing valved passages for connection of one end of each such passage to such a line and the other ends of the passages opening through said horizontal top wall to terminate at the inside surface of said top wall so that water may pass from one to the other of said passages along the inside surface of said top wall.

The issues to be resolved appear to be adequately stated by the appellant. They relate to whether or not the board committed error in holding "that the unobstructed interior space defined by the side and end wall," set out in appellant's claim, "is obviously disclosed in the Shuldener device; in holding that it would not be unobvious to eliminate the screen and filler tube of Shuldener if it was desired to introduce

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the solution into his tank in some other manner; in holding the location of the tank as being of no patentable significance; in holding it would be obvious to merely arrange the pipe inlet and outlet on the top of the Stewart tank to obtain a flow path as taught by Shuldener and in holding the Shuldener tank does not have segregated bodies of liquid."

The claims relate to a by-pass type of feeder designed to add small amounts of chemical to a water system, the object being to improve the properties of the water by feeding into the system a water solution of the chemical in quantity proportioned to the flow of water therethrough.

The feeder is a closed cylindrical tank mounted on a horizontal pipe of the water system. The tank, in a vertical position, is disclosed as having an inlet \*185 line and an outlet line connecting its top to the water pipe on its opposite sides to carry a by-pass flow of water from the pipe through the tank. The by-pass flow is produced by a pressure differential established in the pipe by a valve, or by other means, such as an orifice plate. Jet fittings connect the inlet and outlet lines to the water pipe. The inlet line has a shut-off valve and the outlet line a needle valve. Lumps of a slowly soluble treating chemical, filling a major portion of the tank, provide a supply of undissolved chemical for maintaining a saturated solution of the chemical in the upper portion of the tank. A flow of water by-passed through the tank engages the solution and feeds it into the water system in proportion to the velocity of the water flow.

The application states that the water by-passed through the tank passes through only the upper portion of the tank and the saturated solution therein.

The Shuldener patent discloses a chemical feeding tank with by-pass feed lines. The inlet and outlet lines enter and exit through the top of the tank from a main water supply pipe. The supply line contains a restricting element which provides for a pressure differential at the points of connection of the by-pass lines to the main supply line. The chemical may be introduced into the tank through a perforated tube at the top to permit water access to the chemical. The chemical begins to dissolve as it passes through the tube. A screen is horizontally placed near the mid-section of the tank, to suspend the undissolved chemical. Any chemical not

dissolved before it reaches the screen is suspended by the screen and dissolves within a few minutes. The heavier, more concentrated solution is said to be in the lower half of the tank, while the solution in the upper half is less concentrated. The tank is supported on a cradle, spaced from the water supply line.

The Stewart patent discloses a feeder for adding boiler compounds to feed water in quantities proportioned to the velocity of water in the feed pipe. The feeder comprises a closed cylindrical tank mounted on an enlarged casing interposed in the feed pipe. An inlet pipe leads from the enlarged casing to the upper portion of the tank diverting thereto a portion of the feed water. An outlet pipe leads from the upper portion of the opposite side of the tank to the enlarged casing. This pipe has an extension within the tank leading from the upper portion of the tank to a point near the bottom of the tank. The chemical to be dissolved is introduced by means of a funnel through the top of the tank. The inlet pipe is provided with a regulating valve and the outlet pipe is provided with a cut-off valve.

The board, in finding the claimed structure unpatentable over Shuldener, said:

\* \* \* The claims attempt to distinguish over Shuldener by stating that the sides and end walls of the tank provide an unobstructed interior space. This construction is obviously disclosed in the Shuldener device. The fact that Shuldener provides the tank interior with a basket and filler pipe for the purpose of introducing chemicals into solution in a certain desired manner does not result in a modification of the area encompassed by the wall structure. However, we agree with the position taken by the examiner that it would not be unobvious to eliminate the screen and filler tube of Shuldener if it was desired to introduce the solution into his tank in some other manner. The water circulation and entrainment of chemical solution in the Shuldener device would still function in the same manner if the screen and filler tube were removed.

We do not agree that the presence of a basket and filler tube does not result in a "modification" of the tank interior in Shuldener. The claims specifically require that the interior space be "clear and

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unobstructed." While a wire mesh basket may not be much of an obstruction to the flow of water, this is in part the kind of obstruction appellant seeks to obviate. It is noted that one of the drawbacks of the prior art, according to the instant specification, was the presence of "strainers" at either end. For this reason, we cannot say that the perforated screen disclosed and claimed in Shuldener is not an obstruction in any sense of the word.

On the other hand, we agree with the finding below that it would be obvious to one having ordinary skill in the art to remove the screen and tube in the Shuldener tank to provide "a clear and unobstructed interior space" as in the claims here presented.

Appellant contends that the board's holding that it would not be unobvious to eliminate the screen and filler tube of Shuldener ignores the inventive concept of Shuldener. It is asserted that such modification would change the function of Shuldener's feeder tank in that he would not be able to obtain a concentrated solution in the lower half of the tank and an unconcentrated solution in the upper half of the tank.

Appellant's contention that the inventive concept of Shuldener requires the \*186 maintenance of a supply of chemical near the center of the tank to permit the incoming turbulent flow of water to aid in dissolving of the chemical, is negated by the plain indication of Shuldener that the chemical is charged into the tank only after the shunt flow of water through the tank has been shut off by closing the appropriate valve, thus eliminating the flow of water through the tank while the chemical is dissolving.

[1] It is, of course, apparent that the elimination of the Shuldener screen and filler tube eliminates the functions of those elements. It is well settled, however, that omission of an element and its function in a combination is an obvious expedient if the remaining elements perform the same functions as before. *In re Nelson*, 40 CCPA 708, 198 F.2d 837, 95 USPQ 82; *In re Eliot*, 22 CCPA 1088, 76 F.2d 309, 25 USPQ 111.

We believe the record clearly supports the conclusion of the board that no change in the functions of the remaining elements would result

from the omission of the screen and filler tubes.

We find no logical support for appellant's argument that to remove the screen and filler tube would destroy the structure relied on by Shuldener to execute his invention since Shuldener considered it necessary to have a means for providing the concentrated and unconcentrated solutions in his tank. The Shuldener patent discloses that the screen "will intercept any chemical that has not dissolved by the time it reaches the screen and this may occur when the chemical is poured in fast." This indicates that much, if not all, of the chemical would dissolve before reaching the screen. Shuldener indicates that the filler tube is a "preferred" element which "may be" provided to confine the solid chemical as it passes through the upper portion of the tank. The screen and tube would seem to be indicated when it would be advantageous to dissolve the chemicals in the upper portion of the tank. If it were thought desirable to dissolve the solid chemical in the lower portion of the tank, elimination of the screen and tube would seem to be suggested. The purpose of the Shuldener screen is to facilitate the dissolving of highly soluble chemicals while appellant specifies a slowly soluble reacting chemical. It would be apparent that a slowly soluble chemical might be used in Shuldener and that it would be obvious to omit the screen in such case.

[2] We agree with the board that whether the tank is located on the water line or spaced therefrom as shown by Shuldener is of no patentable significance. Location here appears to have no significant relation to the circulation of water through the tank or the entrainment of the chemical solution. Appellant contends that location on the water line combines features of simplicity and economy not present in Shuldener. Such considerations would not alone necessarily impart patentability. *In re Yettito*, 47 CCPA 792, 274 F.2d 953, 124 USPQ 506.

If the matter of location involved patentable significance, the concept is not novel with appellant, as it is clearly disclosed by the Stewart patent.

Appellant asserts error on the part of the board in holding that it would be obvious to merely arrange the pipe inlet and outlet in the top of the Stewart tank to obtain a flow path as taught by Shuldener,

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contending that since the function of Shuldener and Stewart is different, they cannot be combined. In this connection appellant asserts that there is no teaching in Stewart of the flow of water through the inlet pipe with passage under and in close proximity to the underside of the top wall.

We think *In re Attwood*, 45 CCPA 824, 828, 253 F.2d 234, 117 USPQ 184, 187, is pertinent:

Appellant has done no more than to select a plurality of individual features from the prior art and incorporate them into a unitary structure without materially altering the structure or function of each individual feature and without producing any new or unexpected result.

For the foregoing reasons we hold that the decision of the Board of Appeals rejecting claims 8 and 9 to be correct, and it is, therefore, *affirmed*.

FN1 Serial No. 569,808, filed March 6, 1956.

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